

ABSTRACT OF THE DISCLOSURE

An image forming device including a power source for applying a transfer bias to the transfer roller. The power source includes a forward transfer bias circuit for applying a forward transfer bias during an image transfer process through constant current control, and a reverse transfer bias circuit for applying a reverse transfer bias during a cleaning operation through constant current control, both circuits being connected in series. During constant current control, the forward transfer bias circuit detects a resistance value Z on the transfer roller end using the equation $Z=(\alpha V_e - R i_1)/i_1$, where α is the ratio of voltages in the secondary winding and auxiliary winding in the transformer of a forward transfer booster/rectifying and smoothing circuit, V_e is the output voltage from a forward transfer output voltage detecting circuit, R is the resistance in a discharge resistor of a reverse transfer booster/rectifying and smoothing circuit, and i_1 is the constant current setting. The forward transfer bias circuit applies a forward transfer bias to the transfer roller based on this detected resistance Z.